

In the claims:

Claims 1-5 cancelled

6. (Currently amended) A method of generating, storing and accessing genomic information, that comprises, generating image patterns containing such information in the form of standardized gene-specific two-dimensional spot patterns of gene fragments distributed by electrophoresis in a gel; formatting the image spot patterns for standardized entry into an image database; storing the same in said database; and enabling accessing of the database for such purpose as the inputting of new image standardized two-dimensional format spot patterns into the database, the retrieving of specific standardized image spot pattern information stored in the database, and comparison and analysis amongst the standardized two-dimensional format image spot patterns. The method of claim 2, wherein the electrophoresis is enabled by providing the identical gene-specific customized assay kits to the electrophoresis user for generating each new gene fragment electrophoresis spot pattern, designed to facilitate said standardized formatting of the resulting uniform two-dimensional spots pattern images just as they appear in the gel following two-dimensional electrophoresis, whereby a positional shift of a spot in a new image spot pattern during such pattern overlay can be detected.

7. (Original) The method of claim 6 wherein each kit is customized for a specific known gene or genes of specific individuals.

8. (Original) The method of claim 6 wherein the kit is designed for an unknown gene or genes.

9. (Original) The method of claim 7, wherein the image comparison and analyzing assists in identifying known-mutations of the specified gene(s).

10. (Original) The method of claim 7 wherein spot image comparison and analyzing assists in identifying target populations for new drugs candidacy.

11. (Original) The method of claim 6 wherein the inputting of new spot pattern images into the database, and the retrieving and accessing of information there from is networked to external researchers, diagnosticians and others, enabling the developing of the data base from global population bases, and usage of the data base globally as well.

Claims 12-16 cancelled

17. (Currently Amended) The method of claim 6_2 in which the compiled two-dimensional 2-D spot pattern images are directly correlated with protein structure through the linking of the database to protein databases and protein modeling software.

18. (Currently Amended) The method of claim 6_4 wherein the database is linked to other bioinformatics resources including other genomic references and protein modeling software and databases.

Claims 19 and 20 cancelled.

21. (Currently Amended) The method of claim 6_16 wherein the standardized format of the electrophoresis gel spot pattern images is formed by standardizing spot size, position and contrast.